

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 5 and 7, amend claims 1, 6 and 13, and add new claims 88-97 as follows:

Listing of Claims:

1. (Currently Amended) A carrier for supporting a microelectronic substrate relative to a planarizing medium during planarization of the microelectronic substrate, the carrier comprising:

a support member; and

a flexible, compressible membrane adjacent to the support member, the membrane having a first portion with a first thickness and a second portion with a second thickness greater than the first thickness, the membrane having a generally circular planform shape where the first and second portions of the membrane are annular with the first portion disposed radially inwardly from the second portion, the first portion of the membrane being aligned with a first part of the microelectronic substrate when the membrane engages the microelectronic substrate, the second portion of the membrane being aligned with a second part of the microelectronic substrate when the membrane engages the microelectronic substrate, the substrate directly contacting the membrane and being held stationary with respect to the membrane as the substrate is moved relative to the planarizing medium.

2-3. (Cancelled)

4. (Original) The carrier of claim 1 wherein the membrane has a first surface facing a generally flat surface of the support member and a second surface facing opposite the first surface toward the microelectronic substrate when the membrane engages the microelectronic substrate, the first surface being generally in direct contact with the flat surface of the support member.

5. (Cancel)

6. (Currently Amended) The carrier of claim ~~5~~ 1 wherein the first and second portions of the membrane are concentric.

7. (Cancel)

8. (Original) The carrier of claim 1 wherein the membrane includes a membrane material and the membrane is formed by injecting the membrane material into a mold.

9. (Original) The carrier of claim 1 wherein the membrane includes at least one of neoprene and silicone.

10. (Original) The carrier of claim 1 wherein the first thickness of the membrane is approximately 0.030 inches.

11. (Original) The carrier of claim 1 wherein a ratio of the second thickness of the membrane to the first thickness of the membrane is less than approximately two.

12. (Original) The carrier of claim 1 wherein the first and second portions are adjacent to each other.

13. (Currently Amended) The apparatus of claim 1 wherein ~~the first and second portions of the membrane are radially disposed relative to each other and~~ an intermediate thickness of the membrane varies in a generally continuous manner between the first thickness and the second thickness.

14-59. (Cancelled)

60. (Previously Presented) A carrier for supporting a microelectronic substrate relative to a planarizing medium during planarization of the microelectronic substrate, the carrier comprising:

a support member; and

a flexible, compressible membrane having an upper ply adjacent to the support member, and a lower ply depending downwardly from the upper ply, the lower ply having a first portion with a first thickness and a laterally spaced apart second portion with a second thickness greater than the first thickness, the first portion of the lower ply being aligned with a first part of the microelectronic substrate and applying a first force to the substrate when the lower ply engages the microelectronic substrate, the second portion of the lower ply being aligned with a second part of the microelectronic substrate and applying a second force different from the first force when the lower ply engages the microelectronic substrate, the first and second portions simultaneously directly contacting the microelectronic substrate when the lower ply engages the substrate, the substrate being held stationary relative to the membrane as the substrate is moved relative to the planarizing medium.

61. (Previously Presented) The carrier of claim 60 wherein the support member has a generally circular planform shape.

62. (Previously Presented) The carrier of claim 60 wherein the upper ply has a generally circular planform shape and the lower ply has a generally annular shape with the first portion disposed radially inwardly from the second portion.

63. (Previously Presented) The carrier of claim 60 wherein the upper ply has a generally circular planform shape and the lower ply has a generally annular shape with the second portion disposed radially inwardly from the first portion.

64. (Previously Presented) The carrier of claim 60 wherein a ratio of the second thickness of the lower ply to the first thickness of the lower ply is less than approximately two.

65. (Previously Presented) The carrier of claim 60 wherein the first thickness of the lower ply is approximately 0,030 inches.

66. (Previously Presented) The carrier of claim 60 wherein the upper ply includes at least one of neoprene and silicone.

67. (Previously Presented) The carrier of claim 60 wherein the lower ply includes at least one of neoprene and silicone.

68. (Previously Presented) The carrier of claim 60 wherein the upper ply and the lower ply are formed from a compressible material by injecting the compressible material into a mold.

69. (Previously Presented) The carrier of claim 60 wherein the upper ply and the lower ply are adhesively attached.

70. (Previously Presented) The carrier of claim 60 wherein the first and second portions of the lower ply are radially disposed relative to each other and an intermediate thickness of the lower ply varies in a generally continuous manner between the first thickness and the second thickness.

71. (Previously Presented) A carrier for supporting a microelectronic substrate relative to a planarizing medium during planarization of the microelectronic substrate, the carrier comprising:

a support member; and

a flexible, compressible membrane adjacent to the support member, the membrane having a first portion with a first thickness and a laterally spaced apart second portion with a second thickness greater than the first thickness, the first portion of the membrane being configured to apply a first force to the substrate when the membrane engages the microelectronic substrate, the second portion of the membrane being configured to apply a second force to the substrate when the membrane engages the microelectronic substrate, the second force being

different from the first force and the first and second portions simultaneously contacting the microelectronic substrate when the membrane directly engages the substrate, the substrate being held stationary relative to the membrane as the substrate is moved across the planarizing medium.

72. (Previously Presented) The carrier of claim 71 wherein the support member has a generally circular planform shape.

73. (Previously Presented) The carrier of claim 71 wherein a ratio of the second thickness of the membrane to the first thickness of the membrane is less than approximately two.

74. (Previously Presented) The carrier of claim 71 wherein the first thickness of the membrane is approximately 0.030 inches.

75. (Previously Presented) The carrier of claim 71 wherein the membrane is comprised of at least one of neoprene and silicone.

76. (Previously Presented) The carrier of claim 71 wherein the membrane includes at least one of neoprene and silicone.

77. (Previously Presented) The carrier of claim 71 wherein the membrane is formed from a compressible material by injecting the compressible material into a mold.

78. (Previously Presented) A carrier for supporting a microelectronic substrate relative to a planarizing medium during planarization of the microelectronic substrate, the carrier comprising:

a support member; and

a flexible, compressible membrane having an upper ply adjacent to the support member, and a lower ply depending downwardly from the upper ply, the lower ply having a first portion with a first thickness and a laterally spaced apart second portion with a second thickness

greater than the first thickness, the first portion of the lower ply being configured to apply a first force to the substrate when the substrate is aligned with the lower ply and the second portion being configured to apply a second force to the substrate when the substrate is aligned with the lower ply, the first and second portions simultaneously directly contacting the substrate, the substrate being held stationary with respect to the lower ply as the substrate is moved across the planarization medium .

79. (Previously Presented) The carrier of claim 78 wherein the support member has a generally circular planform shape.

80. (Previously Presented) The carrier of claim 78 wherein the upper ply has a generally circular planform shape and the lower ply has a generally annular shape with the first portion disposed radially inwardly from the second portion.

81. (Previously Presented) The carrier of claim 78 wherein a ratio of the second thickness of the lower ply to the first thickness of the lower ply is less than approximately two.

82. (Previously Presented) The carrier of claim 78 wherein the first thickness of the lower ply is approximately 0.030 inches.

83. (Previously Presented) The carrier of claim 78 wherein the upper ply includes at least one of neoprene and silicone.

84. (Previously Presented) The carrier of claim 78 wherein the lower ply includes at least one of neoprene and silicone.

85. (Previously Presented) The carrier of claim 78 wherein the upper ply and the lower ply are formed from a compressible material by injecting the compressible material into a mold.

86. (Previously Presented) The carrier of claim 78 wherein the upper ply and the lower ply are adhesively attached.

87. (Previously Presented) The carrier of claim 78, wherein the first and second portions of the lower ply are radially disposed relative to each other and an intermediate thickness of the lower ply varies in a generally continuous manner between the first thickness and the second thickness.

Please add the following new claims.

88. (New) A carrier for supporting a microelectronic substrate relative to a planarizing medium during planarization of the microelectronic substrate, the carrier comprising:
a support member; and

a flexible, compressible membrane adjacent to the support member, the membrane having a first portion with a first thickness and a second portion with a second thickness greater than the first thickness, where a ratio of the second thickness of the membrane to the first thickness of the membrane is less than approximately two, and the first portion of the membrane being aligned with a first part of the microelectronic substrate when the membrane engages the microelectronic substrate, the second portion of the membrane being aligned with a second part of the microelectronic substrate when the membrane engages the microelectronic substrate, the substrate directly contacting the membrane and being held stationary with respect to the membrane as the substrate is moved relative to the planarizing medium.

89. (New) The carrier of claim 88 wherein the membrane has a first surface facing a generally flat surface of the support member and a second surface facing opposite the first surface toward the microelectronic substrate when the membrane engages the microelectronic substrate, the first surface being generally in direct contact with the flat surface of the support member.

90. (New) The carrier of claim 88 wherein the membrane has a generally circular planform shape and the first and second portions of the membrane are annular with the first portion disposed radially inwardly from the second portion.

91. (New) The carrier of claim 90 wherein the first and second portions of the membrane are concentric.

92. (New) The carrier of claim 89 wherein the membrane has a generally circular planform shape and the first and second portions are annular with the second portion disposed radially inwardly from the first portion.

93. (New) The carrier of claim 88 wherein the membrane includes a membrane material and the membrane is formed by injecting the membrane material into a mold.

94. (New) The carrier of claim 88 wherein the membrane includes at least one of neoprene and silicone.

95. (New) The carrier of claim 88 wherein the first thickness of the membrane is approximately 0.030 inches.

96. (New) The carrier of claim 88 wherein the first and second portions are adjacent to each other.

97. (New) The apparatus of claim 88 wherein the first and second portions of the membrane are radially disposed relative to each other and an intermediate thickness of the membrane varies in a generally continuous manner between the first thickness and the second thickness.